UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,298	12/15/1999	PETER T. LARSEN	042390.P7833	7343

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EXAMINER
TRAN, DENISE

ART UNIT	PAPER NUMBER
2186	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)	
Office Action Summary	09/464,298	LARSEN ET AL.	
	Examiner	Art Unit	
	Denise Tran	2186	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *30 June 2003* .

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-23,32-34 and 38-43* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) *38-43* is/are allowed.

6) ☒ Claim(s) *1-23 and 32-34* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

     If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

     a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

FINAL ACTION

1.   The applicant's amendment filed 6/30/03 has been considered. Claims 1-23, 32-

34 and claims 38-43 are presented for examination. Claims 24-31 and 35-37 have

been cancelled.

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1–23 and 32-34 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Applicant's admitted prior art, the current specification pages 1-4 and

figs 1-2, in view of Walukas, US 6,229,737, and further in view of James et al., U.S.

patent No. 5966723 (hereinafter James).

As per claims 1 and 32, AAPA teaches a machine readable medium having

embodied thereon a computer program being executable by a machine to perform a

method of programming a memory (e.g., page 1) comprising: sending a command to a

memory device, said command requesting said memory device to enter a program

mode (e.g., page 2, lines 10-20); sending a first address to said memory (e.g., page 2,

lines 15-20); sending a first data to said memory device, said first data to be

programmed at said first address (e.g., page 2, lines 15-21); sending a first write signal

to said memory device, said first write signal to cause said first data to be programmed

at said first address (e.g., page 4, lines 5-10); sending a second data to said memory

device (e.g., fig. 2, data of 230, page 4, lines 15-20); and sending a second write signal

to said memory, said second write signal to cause said second data to be programmed

at a second address (e.g., fig. 2, write enable, page 4, lines 5-10 and 15-20). AAPA

does not explicitly show the use of data packets. Walukas show the use of data packet

(e.g., col. 4, lines 1-2). It would have been obvious to one of ordinary skill in the art at

the time the invention was made to apply the teaching of Walukas into the system of

AAPA because it would increase data programming speed and efficiency. AAPA and

Walukas do not explicitly show a fast program mode and said second address

generated by said memory device by incrementing said first address a predetermined

amount. James shows the use of a fast program mode (e.g., col. 3, lines 39-41; fig. 4,

els 113 and 121) and a second address generated by a memory device by

incrementing a first address a predetermined amount (e.g., col. 9, lines 10-20). It would

have been obvious to one of ordinary skill in the art at the time the invention was made

to apply the teaching of James into the combined system of AAPA and Walukas

because it would increase speed, throughput, and flexibility of programming memory

device.

As per claims 12, AAPA teaches a method of writing data comprising: receiving

a command in a memory device, said command requesting said memory device to

enter a program mode (e.g., page 2, lines 10-20); receiving a first address at an

address input of said memory (e.g., page 2, lines 15-20; page 3, lines 17-20); receiving

a first data, said first data to be programmed at said first address (e.g., page 2, lines 15-

21); receiving a write signal (e.g., page 4, lines 5-10); programming said first data to

said first address (e.g., page 4, lines 5-10); receiving a second data (e.g., fig. 2, data of

230, page 4, lines 14-20); receiving a second write signal (e.g., page 4, lines 5-10 and

14-20); and programming said second data at said second address (e.g., page 4, lines

5-10 and 14-20). AAPA does not explicitly show the use of data packets. Walukas

show the use of data packet (e.g., col. 4, lines 1-2). It would have been obvious to one

of ordinary skill in the art at the time the invention was made to apply the teaching of

Walukas into the system of AAPA because it would increase data programming speed

and efficiency. AAPA and Walukas do not explicitly show a fast program mode;

incrementing an internal program address from said first address to a second address,

said second address sequential to said first address; and if an address at said address

input is still said first address. James shows a fast program mode (e.g., col. 3, lines 39-

41; fig. 4, els 113 and 121); incrementing an internal program address from said first

address to a second address, said second address sequential to said first address (e.g.,

col. 9, lines 10-20; col. 12, lines 40-46); and if an address at said address input is still

said first address (e.g., col. 12, lines 15-20 and lines 40-46). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to apply the

teaching of James into the combined system of AAPA and Walukas because it would

increase speed, throughput, and flexibility of programming memory device.

As per claims 2 and 13, AAPA and Walukas do not explicitly show said command

is a fast program mode command. James shows the use of command is a fast program

mode command (e.g., col. 3, lines 39-41; fig. 4, els 113 and 121). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of James into the combined system of AAPA and Walukas because it would increase speed, throughput, and flexibility of programming memory device.

As per claims 3, 14 and 33, AAPA teaches sending a confirmation of said command (e.g., page 3 line 20 to page 4, line 1).

As per claims 4 and 15, AAPA and Walukas do not explicitly show wherein said first address being a starting address. James shows wherein said first address being a starting address (e.g., fig. 4, el. 115 and col. 9, lines 40-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of James into the combined system of AAPA and Walukas because it would increase speed, throughput, and flexibility of programming memory device.

As per claims 5 and 16, AAPA teaches wherein said memory device is a flash memory (e.g., page 2, lines 10-13).

As per claims 6 and 34, AAPA teaches sending a termination sequence to exit said program mode (e.g., page 4, lines 11- 13; fig. 1, program done?, 140, 150, and 110).

As per claims 8, AAPA teaches wherein said termination sequence comprising: sending a second address to said memory device, wherein second address is different from said first address (e.g., fig.1, els. 150 and 110).

As per claim 9, AAPA and Walukas teaches the claimed invention as discussed above. Walukas show the use of data packet (e.g., col. 4, lines 1-2). AAPA and Walukas do not explicitly show wherein said termination sequence further comprises sending a data packet comprising all 0's to said memory device. James shows sending/receiving a data comprising all 0's to said memory device (e.g., fig. 5, el. 175 and col. 13, lines 40-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of James into the combined system of AAPA and Walukas because it would increase speed, throughput, and flexibility of programming memory device.

As per claim 10, AAPA teaches wherein said first address is sent to said memory device as long as said memory device is in said program mode (e.g., page 4, lines 5-10). AAPA and Walukas do not explicitly show a fast program mode. James shows the use of a fast program mode (e.g., col. 3, lines 39-41; fig. 4, els 113 and 121). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of James into the combined system of AAPA and Walukas because it would increase speed, throughput, and flexibility of programming memory device.

As per claim 17, AAPA teaches receiving a termination sequence to exit said program mode (e.g., page 4, lines 11- 13; fig. 1, program done?, 140, 150, and 110).

As per claims 7 and 18, AAPA and Walukas do not explicitly show wherein said termination sequence further comprises sending/receiving a data packet comprising all 1's to said memory device. James shows wherein said termination sequence comprises sending/receiving a data packet comprising all 1's to said memory device (e.g., fig. 5, el. 175 and col. 13, lines 40-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of James into the combined system of AAPA and Walukas because it would increase speed, throughput, and flexibility of programming memory device. AAPA does not explicitly show the use of data packets. Walukas show the use of data packet (e.g., col. 4, lines 1-2. it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Walukas into the system of AAPA because it would increase data programming speed and efficiency.

As per claim 19, AAPA teaches wherein said termination sequence comprising: receiving a new address at said address input of said memory device (e.g., page 3, lines 17-20 and lines 10-15) wherein said new address is different from said first address (e.g., fig.1, els. 150 and 110).

As per claims 20-21, AAPA teaches wherein said command is received in control logic within said memory device (e.g., page 3, lines 19-20); wherein said control logic is a write state machine (e.g., page 2, lines 5-10).

As per claims 22, AAPA and Walukas do not explicitly show wherein said command causes said control logic to program data at sequential addresses in said memory device. James shows wherein a command causes a control logic to program data at sequential addresses in a memory device (e.g., col. 9, lines 15-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of James into the combined system of AAPA and Walukas because it would increase speed, throughput, and flexibility of programming memory device.

As per claims 11 and 23, AAPA and Walukas do not explicitly show polling a pin on said memory device to determine a status or sending a status value from within said memory device to an output pin on said memory device. James shows polling a pin on said memory device to determine a status (e.g., col. 8, lines 52-60) or sending a status value from within said memory device to an output pin on said memory device (e.g., col. 8, lines 52-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of James into the combined system of AAPA and Walukas because it would increase speed, throughput, and flexibility of programming memory device.

4.   Claims 38-43 are allowable over the prior art of record.

5.   Applicant's arguments filed 6/30/03 have been fully considered but they are not

persuasive.

6.   In the remarks, the applicant's argued in substance that (1) the combination of

AAPA, Walukas, and James would fail to teach or disclose the claimed limitations of

claim 1.

        As to point (1) the examiner disagreed with the applicant's arguments because

the combination of AAPA, Walukas, and James disclose the claimed limitations of claim

1. In particular, As per claims 1 and 32, AAPA teaches a machine readable medium

having embodied thereon a computer program being executable by a machine to

perform a method of programming a memory (e.g., page 1) comprising: sending a

command to a memory device, said command requesting said memory device to enter

a program mode (e.g., page 2, lines 10-20); sending a first address to said memory

(e.g., page 2, lines 15-20); sending a first data to said memory device, said first data to

be programmed at said first address (e.g., page 2, lines 15-21); sending a first write

signal to said memory device, said write signal to cause said first packet of data to be

programmed at said first address (e.g., page 4, lines 5-10); sending a second data to

said memory device (e.g., fig. 2, data of 230, page 4, lines 15-20); and sending a

second write signal to said memory to cause said second packet of data to be

programmed at a second address (e.g., fig. 2, write enable, page 4, lines 5-10 and 15-

20). AAPA does not explicitly show the use of data packets. Walukas show the use of

data packet (e.g., col. 4, lines 1-2. It would have been obvious to one of ordinary skill

in the art at the time the invention was made to apply the teaching of Walukas into the

system of AAPA because it would increase data programming speed and efficiency.

AAPA and Walukas do not explicitly show said second address generated by said

memory device by incrementing said first address a predetermined amount. James

shows a second address generated by a memory device by incrementing a first address

a predetermined amount (e.g., col. 9, lines 10-20). It would have been obvious to one

of ordinary skill in the art at the time the invention was made to apply the teaching of

James into the combined system of AAPA and Walukas because it would increase

speed, throughput, and flexibility of programming memory device. AAPA and Walukas

do not explicitly show a fast program mode. James shows the use of a fast program

mode (e.g., col. 3, lines 39-41; fig. 4, els 113 and 121). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to apply the teaching

of James into the combined system of AAPA and Walukas because it would increase

speed, throughput, and flexibility of programming memory device.

7.   In the remarks, the applicant's argued in substance that (2) AAPA, Walukas, and

James do not teach or suggest a combination with each other

        As to point (2) In response to applicant's argument that there is no suggestion to

combine the references, the examiner recognizes that obviousness can only be

established by combining or modifying the teachings of the prior art to produce the

claimed invention where there is some teaching, suggestion, or motivation to do so

found either in the references themselves or in the knowledge generally available to one

of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir.

1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

As noted from the applicant's remarks page 7, lines 20-22, "A prima facie case of

obviousness exits when (1) **either the reference(s)** themselves or **the knowledge**

generally available to one of ordinary skill in the art contain some suggestion or

motivation to modify the reference(s) or to combining the reference(s) teaching." In this

case, AAPA does not explicitly show the use of data packets. Walukas show the use of

data packet (e.g., col. 4, lines 1-2. It would have been obvious to one of ordinary skill

in the art at the time the invention was made to apply the teaching of Walukas into the

system of AAPA because it would increase data programming speed and efficiency (

from the knowledge generally available to one of ordinary skill in the art). AAPA and

Walukas do not explicitly show said second address generated by said memory device

by incrementing said first address a predetermined amount. James shows a second

address generated by a memory device by incrementing a first address a

predetermined amount (e.g., col. 9, lines 10-20). It would have been obvious to one of

ordinary skill in the art at the time the invention was made to apply the teaching of

James into the combined system of AAPA and Walukas because it would increase

speed, throughput, and flexibility of programming memory device (from the reference,

James, col. 3, lines 30-55). AAPA and Walukas do not explicitly show a fast program

mode. James shows the use of a fast program mode (e.g., col. 3, lines 39-41; fig. 4, els

113 and 121). It would have been obvious to one of ordinary skill in the art at the time

the invention was made to apply the teaching of James into the combined system of

AAPA and Walukas because it would increase speed, throughput, and flexibility of

programming memory device (from the reference, James, col. 3, lines 30-55).

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Denise Tran whose telephone number is (703) 305-

9823. The examiner can normally be reached on Monday, Thursday and an alternated

Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (703) 305-3821. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for central Official communications and (703) 746-7240 for Non Official communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

[signature]

D.T.
September 11, 2003